### 2013 Water Quality Data - Detected Contaminants

#### INTRODUCTION

This 2013 Water Quality Report from the University of Illinois at Urbana-Champaign (U of I) provides information about the source of campus drinking water, contaminant testing, general health precautions, and how calendar year 2013 sample results compare to regulatory requirements. The University is pleased to report that all United States Environmental Protection Agency (USEPA) and Illinois Environmental Protection Agency (IEPA) drinking water quality standards have been met, with no violations of maximum contaminant levels (MCLs).

### Definitions

- **MCLG**: Maximum Contaminant Level Goal: The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **MCL**: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.
- **MRDL**: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **MRDLG**: The highest level of a disinfectant allowed in drinking water. There is convincing evidence of a disinfectant being necessary for control of microbial contaminants.
- **ppm**: parts per million or milligrams per liter – parts by weight.
- **ppb**: parts per billion or micrograms per liter – parts by volume.
- **NA**: not applicable

#### Lead and Copper

<table>
<thead>
<tr>
<th>Contaminant (Units)</th>
<th>Sampled By: Date</th>
<th>MCLG</th>
<th>MCL</th>
<th># Sites Exceeding AL</th>
<th>Violation?</th>
<th>Typical Source of Contaminant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (ppm)</td>
<td>U of I 6/30/11</td>
<td>1.3</td>
<td>1.3</td>
<td>0.084</td>
<td>NO</td>
<td>Carcinogens of household plumbing; Exposure of natural deposits. Lead from old water service pipe and leaded solder.</td>
</tr>
<tr>
<td>Lead (ppb)</td>
<td>U of I 6/30/11</td>
<td>0</td>
<td>15</td>
<td>1.9</td>
<td>NO</td>
<td>Carcinogens of household plumbing; Exposure of natural deposits.</td>
</tr>
</tbody>
</table>

#### Regulated Contaminants

<table>
<thead>
<tr>
<th>Contaminant (Units)</th>
<th>Sampled By: Date</th>
<th>MCLG</th>
<th>MCL</th>
<th># Sites Detected</th>
<th>Violation?</th>
<th>Typical Source of Contaminant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha-emitters (pCi/L)</td>
<td>U of I 2009</td>
<td>0</td>
<td>15</td>
<td>0.7</td>
<td>NO</td>
<td>Water additive used to control microbial contaminants.</td>
</tr>
<tr>
<td>Arsenic (ppb)</td>
<td>IAWC 2011</td>
<td>0</td>
<td>10</td>
<td>2.5</td>
<td>NO</td>
<td>Water additive used to control microbial contaminants.</td>
</tr>
<tr>
<td>Beta/Photon-Emitting (pCi/L)</td>
<td>U of I 2010</td>
<td>0</td>
<td>4</td>
<td>1.6</td>
<td>NO</td>
<td>Decay of natural and man-made radionuclides.</td>
</tr>
<tr>
<td>Chlorine</td>
<td>U of I 2012</td>
<td>4</td>
<td>4</td>
<td>1.1</td>
<td>NO</td>
<td>Water additive used to control microbial contaminants.</td>
</tr>
<tr>
<td>Fluoride (ppb)</td>
<td>IAWC 2013</td>
<td>2.5</td>
<td>2.5</td>
<td>2.0 - 2.4</td>
<td>NO</td>
<td>Water additive used to control microbial contaminants.</td>
</tr>
<tr>
<td>Total Inorganic Nitrogen (ppm)</td>
<td>U of I 2010</td>
<td>5</td>
<td>5</td>
<td>0.25</td>
<td>NO</td>
<td>Water additive used to control microbial contaminants.</td>
</tr>
<tr>
<td>Total Lead (Trivalent) (ppm)</td>
<td>U of I 2013</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>NO</td>
<td>Naturally present in the environment.</td>
</tr>
<tr>
<td>Sodium (ppm)</td>
<td>U of I 2013</td>
<td>63.2</td>
<td>63.2</td>
<td>63.2</td>
<td>NO</td>
<td>Naturally present in the environment.</td>
</tr>
</tbody>
</table>

#### Water Information Sources

- **Illinois American Water**
  - [www.illinoiswater.com](http://www.illinoiswater.com)
- **United States Environmental Protection Agency**
  - [www.epa.gov/safewater](http://www.epa.gov/safewater)
- **Safe Drinking Water Hotline**
  - (800) 426-4791
- **Illinois Environmental Protection Agency**
  - [www.epa.state.il.us](http://www.epa.state.il.us)
- **Surf Your Watershed**
  - Locate your watershed and a host of information.
  - [www.epa.gov/safewater](http://www.epa.gov/safewater)
- **Envirosfacts**
  - U.S. Environmental data.
  - [www.epa.gov/enviros](http://www.epa.gov/enviros)
- **Local Groups Involved in Water and Environmental Issues**
  - [mahometaquifers.org](http://mahometaquifers.org)
  - [Prarie Rivers Network](http://www.prairienet.org)

If you have any questions about this report or U of I drinking water quality, please contact Facilities & Services, Safety and Compliance at (217) 246-9282 or via email at mahves@illinois.edu. A copy of this report is available from our website at [http://www.fs.illinois.edu/docs/default-source/safety-compliance/water-quality-report2013.pdf](http://www.fs.illinois.edu/docs/default-source/safety-compliance/water-quality-report2013.pdf) or by contacting Safety and Compliance. In compliance with state and United States Environmental Protection Agency (USEPA) regulations, the University issues a report annually describing the quality of your drinking water. The purpose of this report is to increase understanding of drinking water standards and raise awareness of the need to protect your drinking water sources.
WHAT IS THE SOURCE OF U OF I DRINKING WATER?

The University of Illinois purchases drinking water from Illinois-American Water Company (IAWC), Champaign District. IAWC water is delivered through five separate metered feeds into the University water distribution system, which consists of approximately 46 miles of water main. The University distributes this water to the majority of campus buildings. However, some buildings are connected directly to the IAWC water distribution system. As such, the distribution system is considered a public water system. The following information about IAWC, Champaign District water supply is from their 2013 Annual Water Quality Report, available by calling (800) 538-1125 or visiting their website at http://www.illinoisamerican.com.

The source of supply for IAWC, Champaign County District is groundwater. Currently 28 wells deliver water for treatment to three lime-softening plants: the Lincoln Avenue Plant, located in Urbana, the Mattis Avenue Plant, located West of Champaign, and the Bradlee Avenue Plant, located in Champaign, and the Bradley Avenue Plant, located West of Champaign. The wells are primarily located in two areas. The north well field taps the Glasford Aquifer and consists of seven wells that supply the Lincoln Avenue Plant. The well west field consists of 21 wells that draw from the Mahomet Sands Aquifer and supply water to all three plants. The wells range from 150 to 386 feet in depth and are protected from surface contamination by geologic barriers in the aquifers. An aquifer is a porous underground formation (such as sand and gravel) that is saturated with water.

SOURCE WATER ASSESSMENT

The IEPA has completed a source water assessment for the Champaign County system. In this report, IEPA indicates that the wells supplying Champaign County are not geologically sensitive. The IAWC’s susceptibility to groundwater contamination, a Well Site Survey Report from February 1991 and a source inventory conducted in 1999 by the Illinois Rural Water Association in cooperation with the IEPA, were reviewed. Based on the information contained in these documents, potential sources of groundwater contamination are present that could pose a hazard to groundwater pumped by the IAWC community water supply wells.

The IEPA has determined that IAWC – Wells #5, #10, #40, #1, #42, #43, #45, #46, and #47 are susceptible to inorganic chemical (IOC), volatile organic chemical (VOC) and synthetic organic chemical (SOC) contamination. This determination is based on a number of criteria including: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data for the wells. The IEPA has made recommendations to further minimize the risk to the facility’s groundwater supply. If you would like additional information on the source water assessment, please contact Safety and Compliance at (217) 265-9828 or the Groundwater Section of the IEPA at (217) 785-4978.

PROTECTING THE WATER YOU DRINK

In order to ensure that tap water is of high quality, USEPA In order to ensure that tap water is of high quality, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health as public water systems. Illinois American Water’s advanced water treatment processes are designed to reduce any such substances to levels well below any health concern. The University of Illinois at Urbana-Champaign is required to test water in its distribution system for coliform, lead, copper, trihalomethanes, and haloacids. IEPA requires 15 samples per month to be analyzed for coliform. In 2013, normal operations of the U of I water distribution system resulted in approximately 26 samples per month. The most recent testing results for coliform, lead, copper, haloacids and total trihalomethanes (TTHM) are provided in the Data Summary table at the end of this Report.

GENERAL INFORMATION ABOUT ALL DRINKING WATER

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it can dissolve naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Substances that may be present in source water include:

- **Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;
- **Inorganic Contaminants**, such as salts and metals, which may be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
- **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban storm water runoff and septic systems; and
- **Radioactive Contaminants**, which may occur naturally or result from oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Helpline at (800) 426-4791.

IMPORTANT HEALTH CONSIDERATIONS

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline at (800) 426-4791.

In order to ensure that tap water is safe to drink, US EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

USEPA and Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA Safe Drinking Water Hotline at (800) 426-4791.

RADON

IAWC has monitored for radon for years. The Lincoln wells and finished water were sampled for radon in 2007. Finished water levels ranged from 140 – 194 pCi/L, with an average of 167 pCi/L. The USEPA is proposing limits on radon in drinking water depending on other steps that are used to reduce radon from other indoor sources. Radon is a radioactive gas that comes mainly from the soil; however, some groundwater may also contain radon. Inhalation of radon gas has been linked to lung cancer. The contribution from drinking water is usually small compared to normal indoor levels. If you are concerned about radon in your home and would like information on how to have your home tested, contact the Champaign-Urbana Public Health Department at (217) 352-7961 or the National Radon Hotline at (800) SOS RADON.

LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

2013 DATA SUMMARY

The following table lists the contaminants that were detected in your water. The presence of contaminants does not necessarily indicate that the water poses a health risk. The data in this table represents a combination of the testing results on finished water from the distribution system and its parent supply, IAWC. The University of Illinois at Urbana-Champaign monitors water daily at five separate metered feeds. Additionally, the University monitors water at eight points within the campus distribution system. IAWC monitors the parent water supply at points prior to entering the campus distribution system.